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Subject: interference search for SN09/706,968

62467
priority 12/98

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-pending
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Point of Contact:
Mona Smith
Technical Information Specialist
CM1 6A01
Tel: 308-3278

Please send results on paper to Dong Jiang in 10D-08 (mail stop CM1-10C01).
Thank you very much.

Dong Jiang (78243)
703-305-1345
U.S. Patent and Trademark Office
Art Unit 1646
dong.jiang@uspto.gov
CM1-10D08
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Litigation: _____
Full text: _____
Patent Family: _____
Other: _____

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Lexis/Nexis: _____
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Other (specify): _____

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Full text: _____
Patent Family: _____
Other: _____

VENDOR/COST(where applic.)
STN: _____
DIALOG: _____
Questel/Orbit: _____
DRLink: _____
Lexis/Nexis: _____
Sequence Sys.: _____
WWW/Internet: _____
Other (specify): _____

CC -!- DEVELOPMENTAL STAGE: IN KIDNEY EPITHELIAL TISSUES, THE SHORTER
CC FORM PREDOMINATES IN YOUNG (1 DAY OLD) RATS WHILE THE LONGER FORM
CC BECOMES MORE PREVALENT DURING AGING.
CC -!- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
CC PDGF RECEPTOR.
CC -!- SIMILARITY: BELONGS TO THE PDGF/VBGF FAMILY OF GROWTH FACTORS.
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CC -----
CC EMBL: L06894; AAB59693.1; -
CC EMBL: Z14120; CAA78490.1; -
CC EMBL: D10106; BAA00987.1; -
CC EMBL: L06238; AAA1932.1; -
CC EMBL: S57864; AAB26134.2; -
CC HSP: P01127; 1PDG.
CC InterPro: IPR002400; GF_CysKnot.
CC InterPro: IPR000072; PDGF.
CC Pfam: PF00341; PDGF; 1.
CC PRINTS: PR00438; GFCYSKNOT.
CC ProDom: PD001629; PDGF; 1.
CC SMART: SM00141; PDGF; 1.
CC PROSITE: PS00249; PDGF_1; 1.
CC PROSITE: PS0278; PDGF_2; 1.
CC Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing;
KW Signal.
FT SIGNAL 1 20 BY SIMILARITY.
FT PROPEP 21 85 REMOVED BY PROTEOLYSIS.
FT CHAIN 86 204 PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
FT SITE 158 162 RECEPTOR BINDING SITE (POTENTIAL).
FT DISULFID 96 140 BY SIMILARITY.
FT DISULFID 129 177 BY SIMILARITY.
FT DISULFID 133 179 BY SIMILARITY.
FT DISULFID 123 123 INTERCHAIN (BY SIMILARITY).
FT DISULFID 132 132 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 134 134 N-LINKED (GLCNAC...) (BY SIMILARITY).
FT VARSPIC 194 196 GRR -> DVR (IN SHORT ISOFORM).
FT VARSPIC 197 204 MISSING (IN SHORT ISOFORM).
FT CONFLICT 85 111 KRSEIAPAVCKTRTVIPIRSDV -> REVLKRPFPQ
FT CONFLICT 119 119 I -> T (IN REF. 3).
FT SEQUENCE 204 AA; 23307 MW; FA413F74E86F742C CRC64;
Query Match 13.8%; Score 104; DB 1; Length 204;
Best Local Similarity 34.0%; Pred No. 0.0013;
Matches 32; Conservative 12; Mismatches 34; Indels 16; Gaps 6;
QY 41 CTPRNFVSIR-REELKRTDIF--WPGCLLVKRCGNCACCLHNCQCQVPSKV---TK 94
Db 96 CKTRTVIPIRSDVPTSANFLWPPCPEVVKRCTG---CC--NTSSVKCQPSRVHRSV 150
QY 95 KYHEVLQRPKTVGRGLKSLDVALEHHECD 128
Db 151 KVAKVEYVRKKPKLKEV-----QVRLEEHLECAC 179
RESULT 10
PDGA_HUMAN STANDARD; PRT; 211 AA.
AC P04085;
DT 01-NOV-1986 (Rel. 03, Created)
DT 01-NOV-1986 (Rel. 03, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
DE (PDGF-1).
GN PDGFA.
OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=88144463; PubMed=3422746;
RA Bonthron D.T., Morton C.C., Orkin S.H., Collins T.;
RT "Platelet-derived growth factor A chain: gene structure, chromosomal
RT location, and basis for alternative mRNA splicing.";
RL Proc. Natl. Acad. Sci. U.S.A. 85:1492-1496(1988).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=88174698; PubMed=2832727;
RA Rorsman F., Bywater M., Knott T.J., Scott J., Betsholtz C.;
RT "Structural characterization of the human platelet-derived growth
RT factor A-chain cDNA and gene: alternative exon usage predicts two
RT different precursor proteins.";
RL Mol. Cell. Biol. 8:571-577(1988).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86203630; PubMed=3754619;
RA Betsholtz C., Johnson A., Heldin C.H., Westermark B., Lind P.,
RA Urdea M.S., Eddy R., Shows T.B., Philpott K., Mellor A.L., Knott T.J.,
RA Scott J.;
RT "cDNA sequence and chromosomal localization of human platelet-derived
RT growth factor A-chain and its expression in tumour cell lines.";
RL Nature 320:695-699(1986).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE=88030061; PubMed=3666150;
RA Hoppe J., Schumacher L., Eichner W., Weich H.A.;
RT "The long 3'-untranslated regions of the PDGF-A and -B mRNAs are only
RT distantly related.";
RL FEBS Lett. 223:243-246(1987).
RN [5]
RP SEQUENCE OF 1-53 FROM N.A.
RX MEDLINE=93252628; PubMed=8486521;
RA Takimoto Y., Li W.Y., Wang Z.Y., Tong B.D., Deuel T.F.;
RT "Nucleotide sequence of the 5' region of the human platelet-derived
RT growth factor A-chain gene.";
RL Hiroshima J. Med. Sci. 42:47-52(1993).
RN [6]
RP ALTERNATIVE SPLICING.
RX MEDLINE=87287247; PubMed=3614363;
RA Tong B.D., Auer D.E., Jaye M., Kaplow J.M., Ricca G., McConathy E.,
RA Drohan W., Deuel T.F.;
RT "cDNA clones reveal differences between human glial and endothelial
RT cell platelet-derived growth factor A-chains.";
RL Nature 328:619-621(1987).
RN [7]
RP ALTERNATIVE SPLICING.
RX MEDLINE=87287248; PubMed=3614364;
RA Collins T., Bonthron D.T., Orkin S.H.;
RT "Alternative RNA splicing affects function of encoded platelet-derived
RT growth factor A chain.";
RL Nature 328:621-624(1987).
RN [8]
RP INTERCHAIN DISULFIDE BONDS.
RX MEDLINE=92283833; PubMed=1317862;
RA Andersson M., Oestman A., Baekstrom G., Hellman U.,
RA George-Nascimento C., Westermark B., Heldin C.-H.;
RT "Assignment of interchain disulfide bonds in platelet-derived growth
RT factor (PDGF) and evidence for agonist activity of monomeric PDGF.";
RL J. Biol. Chem. 267:11260-11266(1992).
CC -!- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
CC -!- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
CC TRANSFORMATION PROCESSES.
CC -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; A LONG FORM (SHOWN HERE) AND A

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RT endothelial cells."
RL [2]
RN
RP SEQUENCE FROM N.A.
RX MEDLINE=97077124; PubMed=8919691;
RA Grimmond S., Lagercrantz J., Drinkwater C., Sillins G., Townson S.,
RA Pollock P., Gotley D., Carson E., Rakar S., Nordenskjold M., Ward L.,
RA Hayward N., Weber G.;
RT "Cloning and characterization of a novel human gene related to
RT vascular endothelial growth factor."
RL Genome Res. 6:124-131(1996).
CC -!- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS. BINDS HEPARIN.
CC -!- SUBUNIT: HOMODIMER; DISULFIDE-LINKED. CAN ALSO FORM HETERODIMER
CC WITH VEGF.
CC -!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR
CC TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN.
CC -!- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXCEPT LIVER.
CC HIGHEST LEVELS FOUND IN HEART, SKELETAL MUSCLE AND PANCREAS.
CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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CC -----
CC EMBL: U48801; AAB06274.1; -
CC EMBL: U43369; AAA91463.1; -
CC HSP: P15692; IVPF.
CC MIM: 601398; -
CC InterPro: IPR000072; PDGF.
CC Pfam: PF00341; PDGF_1.
CC ProDom: PD001629; PDGF_1.
CC SMART: SM00141; PDGF; 1.
CC PROSITE: PS00249; PDGF_1; 1.
CC PROSITE: PS0278; PDGF_2; 1.
CC Mitogen; Growth factor; Signal; Heparin-binding.
FT SIGNAL 1 21 POTENTIAL.
FT CHAIN 22 188 VASCULAR ENDOTHELIAL GROWTH FACTOR B.
SQ SEQUENCE 188 AA; 21261 MW; F04654D5A3727194 CRC64;

Query Match 14.0%; Score 105.5; DB 1; Length 188;
Best Local Similarity 28.2%; Pred. No. 0.00086;
Matches 31; Conservative 22; Mismatches 40; Indels 17; Gaps 6;

QY 21 GRKSRVVD-LNLTEEVRLYSCTPRNFSVSIREELKRT-DTIFWPGLLVKRCGNCACC 78
D 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 30 GHQRKVVSWIDVYTRA----TCQPREVVVPLTVELMGTVAKQLVPSCVTVQRCG---CC 82

QY 79 LHNCNEQCQVPSKVKYKHYEVQLRPTGTGVLGHSKSLTDVALEHHECDC 128
D 1 : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 83 PD--DGLCEVPTGQHVQRMOILMIRPS-----SOLGEMSLERHSQCEC 124

RESULT 8
VEGF_HUMAN STANDARD; PRT; 215 AA.
AC P15692;
DT 01-APR-1990 (Rel. 14, Created)
DT 01-APR-1990 (Rel. 14, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR
DE PERMEABILITY FACTOR) (VPF).
GN VEGF OR VEGFA.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RN SEQUENCE FROM N.A.

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RX MEDLINE=90069608; PubMed=2479986;
RA Leung D.W., Cachianes G., Kuang W.-J., Goeddel D.V., Ferrara N.;
RT "Vascular endothelial growth factor is a secreted angiogenic
RT mitogen."
RL Science 246:1306-1309(1989).
RN [2]
RN SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RX MEDLINE=90069609; PubMed=2479987;
RA Keck P.J., Hauser S.D., Krivi G., Sanzo K., Warren T., Feder J.,
RA Connolly D.T.;
RT "Vascular permeability factor, an endothelial cell mitogen related to
RT PDGF."
RL Science 246:1309-1312(1989).
RN [3]
RN SEQUENCE FROM N.A.
RX MEDLINE=91268072; PubMed=1711045;
RA Tischer E., Mitchell R., Hartman T., Silva M., Gospodarowicz D.,
RA Fiddes J.C., Abraham J.A.;
RT "The human gene for vascular endothelial growth factor. Multiple
RT protein forms are encoded through alternative exon splicing."
RL J. Biol. Chem. 266:11947-11954(1991).
RN [4]
RN SEQUENCE FROM N.A.
RX MEDLINE=92231879; PubMed=1567395;
RA Weindel K., Marne D., Weich H.A.;
RT "AIDS-associated Kaposi's sarcoma cells in culture express vascular
RT endothelial growth factor."
RL Biochem. Biophys. Res. Commun. 183:1167-1174(1992).
RN [5]
RN PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81.
RX MEDLINE=90062112; PubMed=2584205;
RA Connolly D.T., Olander J.V., Heuvelman D., Nelson R., Monseil R.,
RA Siegel N., Haymore B.L., Leimgruber R., Feder J.;
RT "Human vascular permeability factor. Isolation from U937 cells."
RL J. Biol. Chem. 264:20017-20024(1989).
RN [6]
RN SEQUENCE OF 27-41.
RX MEDLINE=93145946; PubMed=7678805;
RA Fiebig B.L., Jaeger B., Schoellmann C., Weindel K., Wilting J.,
RA Kochs G., Marne D., Hug H., Weich H.A.;
RT "Synthesis and assembly of functionally active human vascular
RT endothelial growth factor homodimers in insect cells."
RL Eur. J. Biochem. 211:19-26(1993).
RN [7]
RN X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135.
RX MEDLINE=97352774; PubMed=9207067;
RA Muller Y.A., Li B., Christinger H.W., Wells J.A., Cunningham B.C.,
RA de Vos A.M.;
RT "Vascular endothelial growth factor: crystal structure and functional
RT mapping of the kinase domain receptor binding site."
RL Proc. Natl. Acad. Sci. U.S.A. 94:7192-7197(1997).
RN [8]
RN X-RAY CRYSTALLOGRAPHY (1.93 ANGSTROMS) OF 34-135.
RX MEDLINE=98035455; PubMed=9351807;
RA Muller Y.A., Christinger H.W., Keyt B.A., de Vos A.M.;
RT "The crystal structure of vascular endothelial growth factor (VEGF)
RT refined to 1.93-A resolution: multiple copy flexibility and receptor
RT binding."
RL Structure 5:1325-1338(1997).
RN [9]
RN X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 39-134.
RX MEDLINE=99119204; PubMed=9922142;
RA Wiesmann C., Christinger H.W., Cochran A.G., Cunningham B.C.,
RA Fairbrother W.J., Keenan C.J., Meng G., de Vos A.M.;
RT "Crystal structure of the complex between VEGF and a receptor-blocking
RT peptide."
RL Biochemistry 37:17765-17772(1998).
RN [10]
RN STRUCTURE BY NMR OF 34-135.
RX MEDLINE=97477915; PubMed=9336848;
RA Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A.,
RA Starovasnik M.A.;
RT "1H, 13C, and 15N backbone assignment and secondary structure of the

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FT CONFLICT 107 107 S -> C (IN REF. 11).
Query Match 14.6%; Score 110; DB 1; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00039;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYPTWQLGKAFVFGKSRVVDLNLTT--EEVRLYSCTPRN--FSVSIREEKRT 57
   :||| | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 72 ELESAR-----GRRS-----LGLSLTAEPAMIAECKTRTEVFBS--RRLIDRT 114
   :||| | | | | | | | | | | | | | | | | | | | | | | | | | |

QY 58 DTIF--WPGCLLVKRGCGNCCACCLHNCQCQVPSKTKKYHEVLQLRP---KTGV-- 108
   : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| : ||| :
Db 115 NANFLWPPCFVQRCSG---CC--NNRNVCQRTQV-----QURPVQVRKIEIVRK 161
   : : | | | | | | | | | | | | | | | | | | | | | | | | | |

QY 109 RGLHKSITDVALEHHEECDC 128
   : : | | | | | | | | | | | | | | | | | | | | | | | | |
Db 162 KPIFKKAT-VTLEDHLACKC 180
   : : | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 4
VEGF_CAVPO STANDARD; PRT; 164 AA.
AC P26617;
DT 01-AUG-1992 (Rel. 23, Created)
DT 01-AUG-1992 (Rel. 23, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) (VASCULAR PERMEABILITY
  FACTOR) (VPE).
GN VEGF.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
RA Berse B.;
RL Submitted (XXX-1992) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
CC CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VASCULAR
CC PERMEABILITY.
CC -1- SUBUNIT: HOMODIMER; DISULFIDE-LINKED.
CC -1- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR
CC TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY
CC SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC
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CC or send an email to license@isb-sib.ch).
CC
CC EMBL; M84230; AAA37057.1; -
CC HSP; P15692; 2VGH.
CC InterPro: IPR000072; PDGF.
CC Pfam: PF00341; PDGF; 1.
CC ProDom: PD001629; PDGF; 1.
CC SMART: SM00141; PDGF; 1.
CC PROSITE: PS00249; PDGF_1; 1.
CC PROSITE: PS0278; PDGF_2; 1.
CC Mitogen; Growth factor; Glycoprotein.
FT DISULFID 25 67
FT DISULFID 56 101
FT DISULFID 60 103
FT DISULFID 50 50
FT DISULFID 59 59 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 74 74 N-LINKED (GLCNAC... ) (POTENTIAL).
SQ SEQUENCE 164 AA; 19330 MW; 9EB86A81A9D5DCA4 CRC64;

Query Match 14.4%; Score 108.5; DB 1; Length 164;
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Best Local Similarity 26.5%; Pred. No. 0.00037;
Matches 27; Conservative 21; Mismatches 37; Indels 17; Gaps 5;

QY 34 EEVRLYS-----CPRNFSVSIREEEL-KRTDTIFWPGCLLVKRCGNCACCLHNCNECO 86
   ||| : | | | | | | | | | | | | | | | | | | | | | | | | |
Db 12 EEVFPMDYVKRSYCRPIEMLVDFIQEYDPDEIEYFAPSCVPLMRCCG---CC--NDESLE 66
   ||| : | | | | | | | | | | | | | | | | | | | | | | | | |

QY 87 CVPKSVTKKYHEVLQLRPKTGVRLGHLKSLTDVALEHHEECDC 128
   ||| : | | | | | | | | | | | | | | | | | | | | | | | | |
Db 67 CVPTPEFNITQIMRIKPHOG-----QHIGEMSFLOHKSCEC 103
   ||| : | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 5
PDGA_XENLA STANDARD; PRT; 226 AA.
AC P13698;
DT 01-JAN-1990 (Rel. 13, Created)
DT 01-JAN-1990 (Rel. 13, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN
  (PDGFA)).
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidae; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Oocyte;
RX MEDLINE=88321676; PubMed=3413486;
RA Mercola M., Melton D.A., Stiles C.D.;
RT "Platelet-derived growth factor A chain is maternally encoded in
  Xenopus embryos.";
RL Science 241:1223-1225(1988).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Oocyte;
RX MEDLINE=90175018; PubMed=2308861;
RA Bejcek B.E., Li D.Y., Deuel T.F.;
RT "Nucleotide sequence of a cDNA clone of Xenopus platelet-derived
  growth factor A-chain.";
RL Nucleic Acids Res. 18:680-680(1990).
CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
CC TRANSFORMATION PROCESSES.
CC -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS: A LONG FORM (SHOWN HERE) AND A
CC SHORT FORM; ARE PRODUCED BY ALTERNATIVE SPLICING. THE LONG FORM
CC CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.
CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
CC PDGF RECEPTOR.
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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CC or send an email to license@isb-sib.ch).
CC
CC EMBL; M23237; AAA49927.1; -
CC EMBL; M23238; AAA49928.1; -
CC EMBL; X17545; CAA35583.1; -
CC PIR; S08220; S08220.
CC HSP; P01127; IPDG.
CC InterPro: IPR002400; GF_cysknot.
CC InterPro: IPR000072; PDGF.
CC Pfam; PF00341; PDGF; 1.
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A;Accession: A01381
A:Molecule type: genomic RNA
A:Residues: 1-226 <DEV>
C:Genetics:
A:Gene: sis
C:Superfamily: platelet-derived growth factor
C:Keywords: growth factor; transforming protein
F:6-226/Domain: platelet-derived growth factor chain B similarity <PDG>

Query Match 13.8%; Score 104.; DB 1; Length 226;
Best Local Similarity 33.3%; Pred. No. 0.0073;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Qy 32 LTEEVRLYSCTPRN--FSVSIREEELKRTDTTF--WPGCLLVKRCGGNCACCLHNCNEQCQ 87
: : : : : : : : : : : : : : : : : : : : : : : :
Db 73 VAEPAMIAECKTRTEVEFEIS--RLIDRTNANFLWPPEVCVEVORCSG---CC--NNRNVCQ 126
: : : : : : : : : : : : : : : : : : : : : : : :

Qy 88 VPSKVTKYHEVLQLRP-----KTGV----RGLHKSLTDVALEHHEECDC 128
: : : : : : : : : : : : : : : : : : : : : : : :
Db 127 RPTQV-----QLRPVQVRKEIVRKPKPIFKKAT-VTLEDHLACKC 165

RESULT 14
B49530
vascular endothelial growth factor homolog A2R, 14.7K - Orf virus
C:Species: Orf virus
C:Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999
C:Accession: B49530
R:Lyttlie, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.
J. Virol. 68, 84-92, 1994
A:title: Homologs of vascular endothelial growth factor are encoded by the poxvirus O
A:Reference number: A49530; MUID:94076465
A:Contents: N22
A:Accession: B49530
A>Status: preliminary
A:Molecule type: DNA
A:Residues: 1-133 <LYT>
A:Cross-references: GB:567520; NID:g456897; PIDN:AAB29220.1; PID:g456899
A>Note: sequence inconsistent with nucleotide translation.
A>Note: sequence extracted from NCBI backbone (NCBIN:141420, NCBIP:141425)

Query Match 13.6%; Score 102.5; DB 2; Length 133;
Best Local Similarity 30.5%; Pred. No. 0.0063;
Matches 32; Conservative 18; Mismatches 40; Indels 15; Gaps 6;

Qy 33 TEEVRLYSCTPRNFVSIRE---ELKRTDTTFWPGCLLVKRCGGNCACCLHNCNEQCVP 89
: : : : : : : : : : : : : : : : : : : : : : : :
Db 28 SEVLKGSECKPRPVPVSVSETHPEL--TSQRFNPPCVTLMRCGG---CC--NDESLECVP 80
: : : : : : : : : : : : : : : : : : : : : : : :

Qy 90 SKVTKKYHEVLQLRPKTVGRGLHKSLTDVALEHHEECDCVCRGST 134
: : : : : : : : : : : : : : : : : : : : : : : :
Db 81 TEEVNVMVELLG-ASGSGSNGMQR----LSFVEHKKCDCRPFMT 120
: : : : : : : : : : : : : : : : : : : : : : : :

RESULT 15
S52130
vascular endothelial growth factor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 14-Jul-1995 #sequence_revision 21-Jul-1995 #text_change 05-Nov-1999
C:Accession: S52130
R:Sharma, H.S.; Tang, Z.H.; Gho, B.C.G.; Verdouw, P.D.
Biochim. Biophys. Acta 1260, 235-238, 1995
A:title: Nucleotide sequence and expression of the porcine vascular endothelial growth
A:Reference number: S52130; MUID:95143284
A:Accession: S52130
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-190 <SHA>
A:Cross-references: GB:X81380; NID:g587559; PIDN:CAA57143.1; PID:g587560


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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/042,105
; FILING DATE: HEREWITH
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/207,550
; FILING DATE: 8-MAR-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/465,968
; FILING DATE: 06-JUN-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: TO BE ASSIGNED
; FILING DATE: 24-DEC-1997
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: ERIC K. STEFFE
; REGISTRATION NUMBER: 36,688
; REFERENCE/DOCKET NUMBER: 1488.1000003/EKS
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)371-2600
; TELEFAX: (202)371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
; US-09-042-105-6

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDLMLLT--EEVRLYSCTPRN--FSVSIREELKRT 57
Db 72 ELESAR-----GRRS-----LGSUTIAEPAMIAECKTRTEVEFIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCNECQCVSKYTKKYHEVLQLRP-----KTGV--- 108
Db 115 NANFLVWPPCQVEVQRCG---CC--NNRNVCQRPQTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHKSLLTDVALEHHECDC 128
Db 162 KPIFKKAT-VTLEDHLACKC 180

RESULT 14
US-08-867-352-4
; Sequence 4, Application US/08867352
; Patent No. 6060273
; GENERAL INFORMATION:
; APPLICANT: Multicistronic expression units and their use
; TITLE OF INVENTION: Multicistronic expression units and their use
; NUMBER OF SEQUENCES: 25
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/867,352
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/387,847
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; FILING DATE:
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-867-352-4

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDLMLLT--EEVRLYSCTPRN--FSVSIREELKRT 57
Db 72 ELESAR-----GRRS-----LGSUTIAEPAMIAECKTRTEVEFIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCNECQCVSKYTKKYHEVLQLRP-----KTGV--- 108
Db 115 NANFLVWPPCQVEVQRCG---CC--NNRNVCQRPQTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHKSLLTDVALEHHECDC 128
Db 162 KPIFKKAT-VTLEDHLACKC 180

RESULT 15
US-09-340-250-29
; Sequence 29, Application US/09340250
; Patent No. 6083723
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/340,250
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/989,251
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 29:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-340-250-29

Query Match 14.6%; Score 110; DB 3; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
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Query Match          14.6%; Score 110; DB 6; Length 220;
Best Local Similarity 32.9%; Pred. No. 0.00015;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
DB 51 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 93

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
DB 94 NANFLVMPPCVEVQRCSG---CC--NNRNVQCRPTQV-----QLRPVQVRKIEIVRK 140

QY 109 RGLHSLTDVALEHHECDC 128
DB 141 KPFEKAT-VTLEDHLACKC 159

RESULT 8
US-08-387-845-4
; Sequence 4, Application US/08387845
; Patent No. 5665567
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: Preparation of heterodimeric PDGF-AB using a
; bicistronic vector system in mammalian cells
; NUMBER OF SEQUENCES: 16
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/387,845
; FILING DATE:
; CLASSIFICATION: 435
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-387-845-4

Query Match          14.6%; Score 110; DB 1; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
DB 72 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
DB 115 NANFLVMPPCVEVQRCSG---CC--NNRNVQCRPTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHSLTDVALEHHECDC 128
DB 162 KPFEKAT-VTLEDHLACKC 180

RESULT 9
US-08-999-811-6
; Sequence 6, Application US/08999811
; Patent No. 5932540
; GENERAL INFORMATION:
; APPLICANT: HU, JING-SHAN
; APPLICANT: ROSEN, CRAIG A.
; APPLICANT: CAO, LIANG
; TITLE OF INVENTION: VASCULAR ENDOTHELIAL GROWTH FACTOR 2
; NUMBER OF SEQUENCES: 15
; CORRESPONDENCE ADDRESS:
```

```
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX
; STREET: 1100 NEW YORK AVENUE
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/999,811
; FILING DATE: HERewith
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/207,550
; FILING DATE: 8-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/465,968
; FILING DATE: 06-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: MARKOWICZ, KAREN R.
; REGISTRATION NUMBER: 36,351
; REFERENCE/DOCKET NUMBER: 1488.1000004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)371-2600
; TELEFAX: (202)371-2540
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: not relevant
; MOLECULE TYPE: protein
; US-08-999-811-6

Query Match          14.6%; Score 110; DB 2; Length 241;
Best Local Similarity 32.9%; Pred. No. 0.00017;
Matches 46; Conservative 13; Mismatches 37; Indels 44; Gaps 12;

QY 2 DLEDYRPTWLLGKAFVGRKSRVVDNLNLT--EEVRLYSCTPRN--FSVSIREELKRT 57
DB 72 ELESAR-----GRRS-----LGSLTIAEPAMIAECKTRTEVFEIS--RRLIDRT 114

QY 58 DTIF--WPGCLLVKRCGNCACCLHNCQCVPKSKYKHYEVLQLRP-----KTGV--- 108
DB 115 NANFLVMPPCVEVQRCSG---CC--NNRNVQCRPTQV-----QLRPVQVRKIEIVRK 161

QY 109 RGLHSLTDVALEHHECDC 128
DB 162 KPFEKAT-VTLEDHLACKC 180

RESULT 10
US-08-778-275-4
; Sequence 4, Application US/08778275
; Patent No. 5935819
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: Preparation of heterodimeric PDGF-AB using a
; bicistronic vector system in mammalian cells
; NUMBER OF SEQUENCES: 16
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPA)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/778,275
; FILING DATE:
; CLASSIFICATION:
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RESULT 3
US-08-915-795-3
; Sequence 3, Application US/08915795

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RESULT      4
US-08-915-795-5
; Sequence 5, Application US/08915795
; Patent No. 6235713
; GENERAL INFORMATION:
; APPLICANT: Marc G. ACHEN
; APPLICANT: Andrew F. WILKS
; APPLICANT: Steven A. STACKER
; APPLICANT: Kari ALITALO
; TITLE OF INVENTION: GROWTH FACTOR
; NUMBER OF SEQUENCES: 11

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RT *Molecular cloning of a novel vascular endothelial growth factor,

VEGF-D.;
 RL Genomics 42:483-488(1997).
 DR EMBL; X9572: CAA67892.1; -.
 DR EMBL; D89628: BAA14002.1; -.
 DR HSSP; P15692: LVPP.
 DR MGD; MGI:108037; Figf.
 DR InterPro; IPR000072; PDGF.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PDGF; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 SQ SEQUENCE 358 AA; 40908 MW; 6636B17FBF07037C CRC64;

Query Match 15.8%; Score 119.5; DB 11; Length 358;
 Best Local Similarity 33.3%; Pred. No. 4.1e-05;
 Matches 36; Conservative 15; Mismatches 42; Indels 15; Gaps 6;
 QY 29 LNLITEVRLYSCTPRNFVSIREEL-KRTDTIFWPQCLLVKRCGNCACCLHNCNECQC 87
 DB 104 LKVIDEWMQTCSPRETCEVASELGKTTTFKPCVNVFRCGG---CC--NEEGVMC 158
 QY 88 V---PSKVTKKYHEVLQLRPKTGVRGLHSLTDVALEHHEECDCVCRG 132
 DB 159 MNTSTVSKQLFEISV--PLTSV----PELVPVKIANHTGCKLPTG 200

RESULT 14
 O42571 PRELIMINARY; PRT; 148 AA.
 AC O42571;
 DT 01-JAN-1998 (TRENBLrel. 05, Created)
 DT 01-JAN-1998 (TRENBLrel. 05, Last sequence update)
 DT 01-JUN-2001 (TRENBLrel. 17, Last annotation update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR 122.
 GN VEGF.
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;
 OC Xenopodinae; Xenopus.
 OX NCBI_TaxID=8355;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.;
 RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF008593; AAB63679.1; -.
 DR HSSP; P15692; LVPP.
 DR InterPro; IPR000072; PDGF.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PDGF; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 SQ SEQUENCE 148 AA; 17234 MW; 4AD153CA2F8B1E95 CRC64;

Query Match 15.5%; Score 117; DB 13; Length 148;
 Best Local Similarity 26.0%; Pred. No. 3e-05;
 Matches 34; Conservative 27; Mismatches 46; Indels 24; Gaps 7;
 QY 6 LYRPTWQLLGKAFVFG----RKSRRVVDNLNLTVEVRLYS---CTPRNFVSIREEL-KRT 57
 DB 16 LYIPHAQLSGAAPMPGEGDHKPTVVKF-----LKVYERSMCQVREILVDIFQEPDEV 69
 QY 58 DTIFWPQCLLVKRCGNCACCLHNCNECQVPSKVTKKYHEVLQLRPKTGVRGLHSLTD 117
 DB 70 EYIFKPCVPLMRCAG---CC--NDESLCVPTECYNITMQIMKIRPH-----ISQIMD 119
 QY 118 VALEHHEECDC 128
 DB 120 MSFQHSQCEC 130

RESULT 15
 O42572 PRELIMINARY; PRT; 194 AA.
 AC O42572;
 DT 01-JAN-1998 (TRENBLrel. 05, Created)
 DT 01-JAN-1998 (TRENBLrel. 05, Last sequence update)
 DT 01-JUN-2001 (TRENBLrel. 17, Last annotation update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR 196.
 GN VEGF.
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;
 OC Xenopodinae; Xenopus.
 OX NCBI_TaxID=8355;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.;
 RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF008594; AAB63680.1; -.
 DR HSSP; P15692; LVPP.
 DR InterPro; IPR000072; PDGF.
 DR Pfam; PF00341; PDGF; 1.
 DR ProDom; PD001629; PDGF; 1.
 DR SMART; SM00141; PDGF; 1.
 DR PROSITE; PS00249; PDGF_1; 1.
 DR PROSITE; PS50278; PDGF_2; 1.
 SQ SEQUENCE 194 AA; 22672 MW; 85D7BEC7CEFEF17E CRC64;

Query Match 15.5%; Score 117; DB 13; Length 194;
 Best Local Similarity 26.0%; Pred. No. 4e-05;
 Matches 34; Conservative 27; Mismatches 46; Indels 24; Gaps 7;
 QY 6 LYRPTWQLLGKAFVFG----RKSRRVVDNLNLTVEVRLYS---CTPRNFVSIREEL-KRT 57
 DB 16 LYIPHAQLSGAAPMPGEGDHKPTVVKF-----LKVYERSMCQVREILVDIFQEPDEV 69
 QY 58 DTIFWPQCLLVKRCGNCACCLHNCNECQVPSKVTKKYHEVLQLRPKTGVRGLHSLTD 117
 DB 70 EYIFKPCVPLMRCAG---CC--NDESLCVPTECYNITMQIMKIRPH-----ISQIMD 119
 QY 118 VALEHHEECDC 128
 DB 120 MSFQHSQCEC 130

Search completed: March 18, 2002, 10:32:10
 Job time: 196 sec

	Query Match	46.0%; Score 346.5; DB 11; Length 370;
	Best Local Similarity	50.0%; Pred. No. 3.7e-30;
	Matches	66; Conservative 23; Mismatches 38; Indels 5; Gaps
QY	2 DLEDLYRPTWLLGKAFVGRKSRRVDLNLLEEVRLYSCTPRNFSVSIREELKRTDTIF 61 : : : : : : : : : : : : : : : : : : :	
Dd	235 DLENLYMDTPRYGRSY-HERXSK-VDLORLNDVKRYSCTRPNHNSVNREELKUTNAVF 292 : : : : : : : : : : : : :	
QY	62 WPGCLLVKRCGGCACCLHNCEQCVPSSKVTKKYHEVLQLRP--KTGVRGHLKSLTDV 118 : : : : : : : : : : : : :	
Dd	293 FPCRLLVQRCCGGCGTLNWKSCTCSSGKTYYKYHEVLKFEPGHFKRGKAKNALVDI 352 : : : : : : : : : : : : :	
QY	119 ALEHHCEDCVC 130 : : : : : : : : : : : : :	
Dd	353 QLDHERCDCIC 364 : : : : : : : : : : : : :	
RESULT	8	
ID	Q9DIL8 PRELIMINARY; PRT; 290 AA.	
AC	Q9DIL8:	
DT	01-JUN-2001 (TrEMBLrel. 17, Created)	
DF	01-JUN-2001 (TrEMBLrel. 17, Last sequence update)	
DE	01-JUN-2001 (TrEMBLrel. 17, Last annotation update)	
DE	1110003109RK PROTEIN.	
GN	G1110003109RIK.	
OS	Mus musculus (Mouse).	
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	
OX	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.	
NB	NCBI_TaxID=10090;	
RN	[1]	
RP	SEQUENCE FROM N.A.	
RC	STRAN=C57BL/6J; TISSUE=EMBryo;	
RX	MEDLINE=21085660; PubMed=11217851;	
RA	Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,	
RA	Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,	
RA	Alizava K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamataka I.,	
RA	Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,	
RA	Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,	
RA	Fleischmann W., Gaasterland T., Gliss C., King B., Kochiwa H.,	
RA	Kuehl P., Lewis S., Matsuo Y., Nikola I., Pesole G., Quackenbush J.,	
RA	Schirml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,	
RA	Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,	
RA	Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,	
RA	Gustincich S., Hill D., Hofman M., Hume D.R., Kamiya M., Lee N.H.,	
RA	Lyon P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,	
RA	Nardone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,	
RA	Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-P.,	
RA	Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,	
RA	Wyshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohzuki S.,	
RA	Hayashizaki Y.;	
RT	"Functional annotation of a full-length mouse cDNA collection.";	
RL	Nature 409:685-690(2001).	
RM	EMBL; AK003359; BAB22735.1; -.	
DR	MGI; MG1:1919035; 1110003109RIK.	
DR	InterPro; IPRO00859; CUB.	
DR	InterPro; IPRO00072; PDGF.	
DR	Pfam; PF00431; CUB; 1.	
DR	SMART; SM00042; CUB; 1.	
DR	SMART; SM00141; PDGF; 1.	
DR	PROSITE; PS01180; CUB; 1.	
DR	PROSITE; PSS0278; PDGF_2; 1.	
SQ	SEQUENCE 290 AA; 33425 MW; 14214509E6717DAB CRC64;	

Query Match	45.8%	Score 345.5;	DB 11;	Length 290;
Best Local Similarity	50.0%;	Pred. No. 3.7e-30;		
Matches	66;	Conservative 22;	Mismatches 39;	Indels 5; Gaps 3;
QY	2	DLEDYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCTPRNFYSIRBEELKRTDTIF	61	
Db	155	DLENLYDTPHYGRSY-HDRKSK-VDLDRNDLVKRYSCCTPRNHSYRLEELKLTWAF	212	

```

QY   62  WPGCLLYKRCGGNCACCLHNCNEQCQVPSKVTKKYHEVLQLRP---KTGVRGLHLKSLTDV 111
      :| | | | :| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   213 FPRCLLYQRCCGCGCTGVNWKSCCTSSGKTVKKYHEVLKFEPGHFKRRGKAKNMALVDI 272

QY   119 ALEHHEECDCVC 130
      I : | | | | | | | | |
Db   273 QLDHHERCDCIC 284

RESULT 9
QB9BW5 PRELIMINARY; PRT; 364 AA.
AC QB9BW5;
DT 01-JUN-2001 (TrEMBLrel. 17, Created)
DT 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE IRIS-EXPRESSED GROWTH FACTOR SHORT FORM.
GN IEGF.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=IRIS;
RA Wistow G.;
RT "Iris-expressed Growth Factor (IEGF).";
RL Submitted (FEB-2001) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY027518; AAK20082.1; -.
SQ SEQUENCE 364 AA; 42166 MW; 245C53B8DDEA9EAC CRC64;

Query Match 45.7%; Score 344.5; DB 4; Length 364;
Best Local Similarity 50.0%; Pred. No. 6.le-30;
Matches 66; Conservative 21; Mismatches 40; Indels 5; Gaps

QY   2 DLEDYRPTWLLGKAFVFGKRSRVVDLNLLTEVRVLYSCTPRNFVSIVSIREELKRTDTIF 61
      ||||| : | : | : | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   229 DLENWYLDTPYRGRSY-HDKRSK-VDLDRNDLADAKRYSTCPNYSVNIREEKLNAVVF 286

QY   62  WPGCLLYKRCGGNCACCLHNCNEQCQVPSKVTKKYHEVLQLRP---KTGVRGLHLKSLTDV 118
      :| | | | :| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db   287 FPRCLLYQRCCGCGCTGVNWRSCCTCSNGKTVKKYHEVLQFEGHIKRRGRAKTMALVDI 346

QY   119 ALEHHEECDCVC 130
      I : | | | | | | | | |
Db   347 QLDHHERCDCIC 358

RESULT 10
QB9ZP0 PRELIMINARY; PRT; 370 AA.
AC QB9ZP0;
DT 01-MAR-2001 (TrEMBLrel. 16, Created)
DT 01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE SPINAL CORD-DERIVED GROWTH FACTOR-B (MSTP036) (IRIS-EXPRESSED GROWTH
GN FACTOR LONG FORM).
GN HSCDGF-B OR IEGF.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC Hamada T., Ui-Tei K., Imaki J., Miyata Y.;
RT "Molecular Cloning of SCDF-B, a Novel Growth Factor Homologous to
RD SCDF/PDGF-C/fallotenein.";
RL Biochem. Biophys. Res. Commun. 0:0-0(2000).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=AORTA;
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Query Match          100.0%; Score 754; DB 4; Length 345;
Best Local Similarity 100.0%; Pred. No. 3.7e-75;
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 60
    |||||
Db 210 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 269
    |||||

QY 61 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
    |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
    |||||

QY 121 EHHEDCDVCRGSGTG 136
    |||||
Db 330 EHHEDCDVCRGSGTG 345
    |||||

RESULT 2
Q9NR1 PRELIMINARY; PRT; 345 AA.
ID Q9NR1
AC Q9NR1;
DT 01-OCT-2000 (Tremblrel. 15, Created)
DT 01-OCT-2000 (Tremblrel. 15, Last sequence update)
DE PLAYLET-DERIVED GROWTH FACTOR C.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Uutela M.,
RA Backstrom G., Hellstrom M., Bostrom H., Li H., Soriano P.,
RA Betscholtz C., Heldin C.-H., Altalo K., Ostman A., Eriksson U.;
RT "PDGF-C is a novel protease-activated ligand for the PDGF alpha
    receptor.";
RL Nat. Cell Biol. 0:0-0(2000).
RL EMBL; AF244813; AAF80597.1; -.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam: PF00431; CUB; 1.
DR Pfam: PF00341; PDGF; 1.
DR SMART; SM00042; CUB; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 39043 MW; 590889CEA55CC5EA CRC64;

Query Match          100.0%; Score 754; DB 4; Length 345;
Best Local Similarity 100.0%; Pred. No. 3.7e-75;
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 60
    |||||
Db 210 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 269
    |||||

QY 61 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
    |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
    |||||

QY 121 EHHEDCDVCRGSGTG 136
    |||||
Db 330 EHHEDCDVCRGSGTG 345
    |||||

RESULT 3
Q9QY71 PRELIMINARY; PRT; 345 AA.
ID Q9QY71
AC Q9QY71;
DT 01-MAY-2000 (Tremblrel. 13, Created)
DT 01-MAY-2000 (Tremblrel. 13, Last sequence update)

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DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
DE FALLOFEIN.
GN PDGFC.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=OVARY;
RA Tsai Y.-J., Lee R.K.-K., Chen Y.-H., Lin S.-P., Cheng W.T.-K.;
RT "CDNA cloning of follotein from mouse ovary";
RL Submitted (JAN-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF117608; AAF22516.1; -.
DR MGD; MGI:1859631; Pdgc.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam; PF00431; CUB; 1.
DR SMART; SM00042; CUB; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 38741 MW; 3A58A1F701B84EA2 CRC64;

Query Match          92.4%; Score 697; DB 11; Length 345;
Best Local Similarity 89.0%; Pred. No. 7.3e-69;
Matches 121; Conservative 11; Mismatches 4; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 60
    :||: ||:|||||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
Db 210 VDLDSLYRPTWLLGKAFVGRKSRVVDNLLTEEVRLVYLSCTPRNFSVSIREELKRTDTI 269
    :||: ||:|||||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:

QY 61 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 120
    |||||
Db 270 FWPGLLVKRCGGNCACCLHNCNCCVPSKVTKKYHEVLQRLPKTGVRGLHKSLLTDVAL 329
    |||||

QY 121 EHHEDCDVCRGSGTG 136
    |||||
Db 330 EHHEDCDVCRGSGTG 345
    |||||

RESULT 4
Q9JHV8 PRELIMINARY; PRT; 345 AA.
ID Q9JHV8
AC Q9JHV8;
DT 01-OCT-2000 (Tremblrel. 15, Created)
DT 01-OCT-2000 (Tremblrel. 15, Last sequence update)
DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR C.
GN PDGFC.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=SWISS-WEBSTER/NIH;
RA Ding H., Wu X., Kim I., Tam P.P.L., Koh G.Y., Nagy A.;
RT "The mouse Pdgc gene: Dynamic expression in embryonic tissues during
    organogenesis.";
RL Mech. Dev. 0:0-0(2000).
DR EMBL; AF286725; AAF91483.1; -.
DR MGD; MGI:1859631; Pdgc.
DR InterPro: IPR000859; CUB.
DR InterPro: IPR000072; PDGF.
DR Pfam; PF00431; CUB; 1.
DR SMART; SM00042; CUB; 1.
DR SMART; SM00141; PDGF; 1.
DR PROSITE; PS01180; CUB; 1.
DR PROSITE; PS0278; PDGF_2; 1.
SQ SEQUENCE 345 AA; 38886 MW; FA1486BED6D362F8 CRC64;

```


GenCore version 4.5
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OM protein - protein search, using sw model

Run on: March 18, 2002, 10:19:33 ; Search time 23.75 Seconds
(without alignments)
424.167 Million cell updates/sec

Title: US-09-706-968-2_COPY_210_345

Perfect score: 754

Sequence: 1 LDLEDLYRPTWOLGKAFV.....DVALEHHBCDCVCRGTGG 136

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 522463.seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A.Geneseq_1101.*

- 1: /SID88/gcgdata/geneseq/geneseq/AA1980.DAT.*
- 2: /SID88/gcgdata/geneseq/geneseq/AA1981.DAT.*
- 3: /SID88/gcgdata/geneseq/geneseq/AA1982.DAT.*
- 4: /SID88/gcgdata/geneseq/geneseq/AA1983.DAT.*
- 5: /SID88/gcgdata/geneseq/geneseq/AA1984.DAT.*
- 6: /SID88/gcgdata/geneseq/geneseq/AA1985.DAT.*
- 7: /SID88/gcgdata/geneseq/geneseq/AA1986.DAT.*
- 8: /SID88/gcgdata/geneseq/geneseq/AA1987.DAT.*
- 9: /SID88/gcgdata/geneseq/geneseq/AA1988.DAT.*
- 10: /SID88/gcgdata/geneseq/geneseq/AA1989.DAT.*
- 11: /SID88/gcgdata/geneseq/geneseq/AA1990.DAT.*
- 12: /SID88/gcgdata/geneseq/geneseq/AA1991.DAT.*
- 13: /SID88/gcgdata/geneseq/geneseq/AA1992.DAT.*
- 14: /SID88/gcgdata/geneseq/geneseq/AA1993.DAT.*
- 15: /SID88/gcgdata/geneseq/geneseq/AA1994.DAT.*
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- 19: /SID88/gcgdata/geneseq/geneseq/AA1998.DAT.*
- 20: /SID88/gcgdata/geneseq/geneseq/AA1999.DAT.*
- 21: /SID88/gcgdata/geneseq/geneseq/AA2000.DAT.*
- 22: /SID88/gcgdata/geneseq/geneseq/AA2001.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	ID	Description
1	754	100.0	318	21	AA1984558
2	754	100.0	339	21	AA1984338
3	754	100.0	345	20	AA1933679
4	754	100.0	345	20	AA1941766
5	754	100.0	345	20	AA1930023
6	754	100.0	345	21	AA1948657
7	754	100.0	345	21	AA1942450
8	754	100.0	345	21	AA1944322
9	754	100.0	345	21	AA1940633
10	754	100.0	345	21	AA1940634
11	754	100.0	345	21	AA1940635

12	754	100.0	345	21	AA1940636	Human VEGF-X prote
13	754	100.0	345	21	AA1940644	Human VEGF-X prote
14	754	100.0	345	21	AA1940650	Human 990126veg p
15	754	100.0	345	21	AA1940651	Human VEGF-X prote
16	754	100.0	345	21	AA1940651	Human VEGF-X prote
17	754	100.0	345	21	AA1940657	Human PRO200 (vasc
18	754	100.0	345	21	AA1940657	Human PRO200 prote
19	754	100.0	345	21	AA1940657	Human PRO713 prote
20	754	100.0	345	21	AA1940657	Human TANGO 128.
21	754	100.0	345	21	AA1940657	Human growth facto
22	754	100.0	345	21	AA1940657	Human growth facto
23	754	100.0	345	21	AA1940657	Amino acid sequenc
24	754	100.0	345	21	AA1940657	Bone morphogenic p
25	754	100.0	345	22	AA1940657	Human PRO200 poly
26	754	100.0	345	22	AA1940657	Human VEGF/PDGF-li
27	754	100.0	345	22	AA1940657	Human LP8, a PDGF-
28	754	100.0	345	22	AA1940657	Human zveg3 prote
29	754	100.0	345	22	AA1940657	Human PRO200 prote
30	754	100.0	345	22	AA1940657	Human PRO200 prote
31	754	100.0	374	21	AA1940639	Human angiogenesis
32	744	98.7	354	21	AA1940640	Human VEGF-X prote
33	744	98.7	354	21	AA1940641	Human VEGF-X prote
34	697	92.4	345	21	AA1940658	Mouse zveg3, SEQ
35	697	92.4	345	21	AA1940661	Murine vascular en
36	697	92.4	345	21	AA1940659	A murine platelet-
37	697	92.4	345	22	AA1940658	Mouse zveg3 prote
38	662	87.8	121	22	AA1940634	Synthetic protein
39	662	87.8	123	22	AA1940633	Human VEGF-X PDGF-
40	646	85.7	149	21	AA1940642	Human VEGF-X prote
41	607	80.5	113	21	AA1940631	Human VEGF-X prote
42	607	80.5	113	21	AA1940632	Human VEGF-X prote
43	590.5	78.3	227	21	AA1940637	Human VEGF-X prote
44	590.5	78.3	227	21	AA1940638	Human VEGF-X prote
45	346.5	46.0	282	21	AA1940653	Human VEGF-X prote

ALIGNMENTS

RESULT 1

AA1940658

ID AA1940658 standard; Protein; 318 AA.

XX AA1940658;

AC AA1940658;

XX 25-JUL-2000 (first entry)

DT 25-JUL-2000 (first entry)

XX A fragment of platelet-derived growth factor C (PDGF-C).

DE A fragment of platelet-derived growth factor C; PDGF-C; cell proliferation;

XX Platelet-derived growth factor C; PDGF-C; cell proliferation;

KW growth factor; heparin; connective tissue; wound healing; VEGF-F;

KW fibroblast mitogenesis; PDGF alpha receptor activation; tumour growth;

KW choriocarcinoma; Wilms tumour; megakaryoblastic leukaemia;

KW lung carcinoma; erythroleukemia; tissue remodelling.

XX Homo sapiens.

OS Homo sapiens.

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XX Homo sapiens.

KW VEGF-E; human; vascular endothelial cell growth factor; wound repair;
 KW treatment; cardiovascular disorder; endothelial disorder; therapy;
 KW tissue generation; regeneration; cardiac hypertrophy; cancer; detection;
 KW angiogenic disorder; age-related macular degeneration; vascular disease;
 KW neovascularization; tumor; gene mapping.

XX Homo sapiens.

OS WO9947677-A2.

XX 23-SEP-1999.

XX 10-MAR-1999; 99WO-US05190.

XX 17-MAR-1998; 98US-0040220.

PR 02-NOV-1998; 98US-0184216.

XX (GETH) GENENTECH INC.

XX Ferrara N, Kuo SS;

PI WPI; 1999-580306/49.

XX N-PSDB; AAZ23691.

XX New growth factor polypeptide useful for treating cardiovascular or
 PT endothelial disorders, e.g. cardiac hypertrophy -
 PT Claim 1; Fig 2; 122pp; English.

XX This invention describes the isolation of a novel human vascular
 CC endothelial cell growth factor-E (VEGF-E) polypeptide which has
 CC tranquilizer, vulnery and cardiant activity. VEGF-E can be administered
 CC therapeutically, especially by expressing encoding polynucleotides, to
 CC treat cardiovascular or endothelial disorders in mammals, especially
 CC humans. It is useful in wound repair and tissue generation and
 CC regeneration, and may especially be used to treat cardiac hypertrophy
 CC It can be combined with a carrier in pharmaceutical compositions, which
 CC can be administered to treat disorders as above. VEGF-E can be used to
 CC screen for antagonists and agonists, and the antagonists administered to
 CC treat angiogenic disorders in mammals (especially humans) e.g. cancer or
 CC age-related macular degeneration. It can be used to generate antibodies,
 CC useful to detect VEGF-E polypeptide, especially to diagnose
 CC cardiovascular, endothelial or angiogenic disorders in mammals (e.g.
 CC by contacting the antibody with a tissue sample and detecting formation
 CC of an antibody-VEGF-E polypeptide complex. Polynucleotides encoding
 CC VEGF-E can be used to diagnose cardiovascular and endothelial disorders
 CC in mammals, by detecting abnormally high or low VEGF-E gene expression in
 CC tissue samples. They can also be used to diagnose a disease or
 CC susceptibility to a disease related to a mutated form of VEGF-E (e.g. a
 CC cardiovascular, endothelial or angiogenic disorder such as a tumor), by
 CC detecting a mutation in the VEGF-E-encoding sequence isolated from a
 CC sample. They may also be used to produce probes useful to detect related
 CC sequences or for gene mapping. This sequence represents the human VEGF-E
 CC protein described in the method of the invention.

XX Sequence 345 AA;

Query Match 100.0%; Score 754; DB 20; Length 345;
 Best Local Similarity 100.0%; Pred. No. 6e-71;
 Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 LDLEDLYRPTWQLLGKAFVFGKRSVVDNLNLTTEVRLYSCTPRNFVSIREELKRTDTI 60

|||||

Db 210 ldledlyrptwqllgkafvfgkrsvvdnlnteervlyscprnfvsireelkrtkti 269

|||||

Oy 61 FWPGLLVKRCGGNACCLHNCNCCQVPSKVTKYKHYEVLQRLPKTVGRGLHKSJTDVAL 120

|||||

Db 270 fwpgccllvkrcgncacclhncncqcvpskvtkkylqlrpkgtvgrlghksltdval 329

|||||

Oy 121 EHHFECDCVCRGTGG 136

Db 330 ehhecdvcrgstgg 345
 |||||||||||||||
 RESULT 4
 AAY41766
 ID AAY41766 standard; Protein; 345 AA.
 XX
 AC AAY41766;
 XX
 DT 07-DEC-1999 (first entry)
 XX
 DE Human PRO200 protein sequence.
 XX
 KW Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation;
 KW probe; blood coagulation disorder; cancer; cellular adhesion disorder;
 KW secreted protein; transmembrane protein.
 XX
 OS Homo sapiens.
 XX
 PN WO9946281-A2.
 XX
 PD 16-SEP-1999.
 XX
 PF 08-MAR-1999; 99WO-US05028.
 XX
 PR 10-MAR-1998; 98US-0077450.
 PR 11-MAR-1998; 98US-0077632.
 PR 11-MAR-1998; 98US-0077641.
 PR 11-MAR-1998; 98US-0077649.
 PR 12-MAR-1998; 98US-0077791.
 PR 13-MAR-1998; 98US-0078004.
 PR 17-MAR-1998; 98US-0040220.
 PR 20-MAR-1998; 98US-0078886.
 PR 20-MAR-1998; 98US-0078910.
 PR 20-MAR-1998; 98US-0078936.
 PR 20-MAR-1998; 98US-0078939.
 PR 25-MAR-1998; 98US-0079294.
 PR 26-MAR-1998; 98US-0079656.
 PR 27-MAR-1998; 98US-0079663.
 PR 27-MAR-1998; 98US-0079664.
 PR 27-MAR-1998; 98US-0079689.
 PR 27-MAR-1998; 98US-0079728.
 PR 27-MAR-1998; 98US-0079786.
 PR 30-MAR-1998; 98US-0079920.
 PR 30-MAR-1998; 98US-0079923.
 PR 31-MAR-1998; 98US-0080105.
 PR 31-MAR-1998; 98US-0080107.
 PR 31-MAR-1998; 98US-0080165.
 PR 31-MAR-1998; 98US-0080194.
 PR 01-APR-1998; 98US-0080327.
 PR 01-APR-1998; 98US-0080328.
 PR 01-APR-1998; 98US-0080333.
 PR 01-APR-1998; 98US-0080334.
 PR 08-APR-1998; 98US-0081049.
 PR 08-APR-1998; 98US-0081070.
 PR 08-APR-1998; 98US-0081071.
 PR 09-APR-1998; 98US-0081195.
 PR 09-APR-1998; 98US-0081203.
 PR 09-APR-1998; 98US-0081229.
 PR 15-APR-1998; 98US-0081817.
 PR 15-APR-1998; 98US-0081838.
 PR 15-APR-1998; 98US-0081952.
 PR 15-APR-1998; 98US-0081955.
 PR 21-APR-1998; 98US-0082568.
 PR 21-APR-1998; 98US-0082569.
 PR 22-APR-1998; 98US-0082700.
 PR 22-APR-1998; 98US-0082704.
 PR 22-APR-1998; 98US-0082804.
 PR 23-APR-1998; 98US-0082767.
 PR 23-APR-1998; 98US-0082796.
 PR 27-APR-1998; 98US-0083336.
 PR 28-APR-1998; 98US-0083322.

Db 210 ldledlyrptwllgkafvgrksrvvdnlnteevrrlyscptprnfsvireelkrtdti 269
QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRLHKSITDVAL 120
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Db 270 fwpgccllvkrccgncacclhncneccqvpstkkyhevlqlrpkrgvrlhksitdval 329
QY 121 EHHECDCVCRGSTGG 136
|||||
Db 330 ehhecdcvcrgstgg 345

RESULT 6
AAB48657
ID AAB48657 standard; Protein; 345 AA.
XX AC AAB48657;
XX 09-MAR-2001 (first entry)
XX 09-MAR-2001 (first entry)
XX Human zvegfg3, SEQ ID NO:33.
XX Human; zvegfg3; zvegfg4 fusion; growth factor homologue; VEGF/PDGF family;
KW CUB domain; PDGF-like activity; mitogenic; osteogenic;
KW neovascularisation; tissue repair; proliferation; differentiation;
KW liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis;
KW periodontal disease; bone fracture; wound healing; vulnery; ischaemia;
KW immunomodulation; hepatic.
XX OS Homo sapiens.
XX PN WO200066736-A1.
XX PD 09-NOV-2000.
XX 03-MAY-2000; 2000WO-US40047.
XX 03-MAY-1999; 99US-0304216.
XX 10-NOV-1999; 99US-0164463.
XX 04-FEB-2000; 2000US-0180169.
XX (ZYMO) ZYMOGENETICS INC.
XX PA Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;
XX WPI; 2000-687541/67.
XX N-PSDB; AAC81582.
XX Growth factor homologs and the nucleic acids that encode them, useful
PT e.g. for treating liver damage, ischemia, multiple sclerosis and
PT Alzheimer's disease -
XX Claim 48; Page 125-126; 143pp; English.

The invention relates to the human growth factor homologue zvegfg4
(AAB48653), and nucleic acids encoding it (AAC81555). Zvegfg4 is a member
of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial
growth factor) family. Zvegfg4 has a growth factor domain (AAB48654)
characterised by a PDGF cystine knot structure, and a CUB domain
(AAB48655) which has a beta barrel structure. Zvegfg4 has PDGF-like
activity, having mitogenic activity on fibroblasts, vascular smooth
muscle cells and pericytes, and has also been shown to stimulate bone
growth. The invention also relates to fusion proteins comprising human
zvegfg4 or fragments thereof, particularly human zvegfg4/human zvegfg3
fusions; expression constructs and host cells comprising human zvegfg4
nucleic acids; the recombinant expression of human zvegfg4; an antibody
which binds to human zvegfg4 or a fragment thereof; a method of activating
a cell-surface PDGF receptor using a zvegfg4-derived polypeptide; a
method of modulating the proliferation, differentiation, migration or
metabolism of bone cells, comprising exposing bone cells to
zvegfg4-derived polypeptides; and a method of detecting a genetic
abnormality in the zvegfg4 gene of a patient. Zvegfg4 proteins and derived
fragments may be used to stimulate tissue development or repair, or
cellular differentiation or proliferation. They are particularly used for

CC the treatment or repair of liver damage, and may also be used to
CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or
CC multiple sclerosis). Due to their osteogenic activity, they may be used
CC in the treatment of periodontal disease and fractures. They may also be
CC used to enhance expansion and mobilisation of haematopoietic stem cells
CC and endothelial precursor stem cells, which may be useful in the
CC treatment of ischaemia, in wound healing, and in the modulation of the
CC immune system. The present sequence represents human zvegfg3.
XX
SQ Sequence 345 AA;

Query Match 100.0%; Score 754; DB 21; Length 345;
Best Local Similarity 100.0%; Pred. No. 6e-71;
Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWLLGKAFVGRKSRVVDNLNLTTEEVRVLYSCTPRNFSVIREELKRDTDTI 60
|||||
Db 210 ldledlyrptwllgkafvgrksrvvdnlnteevrrlyscptprnfsvireelkrtdti 269
QY 61 FWPGLLVKRCGGNCACCLHNCNECQVPSKVTKKYHEVLQRLPKTGVRLHKSITDVAL 120
|||||
Db 270 fwpgccllvkrccgncacclhncneccqvpstkkyhevlqlrpkrgvrlhksitdval 329
QY 121 EHHECDCVCRGSTGG 136
|||||
Db 330 ehhecdcvcrgstgg 345

RESULT 7
AAB24250
ID AAB24250 standard; Protein; 345 AA.
XX AC AAB24250;
XX 08-FEB-2001 (first entry)
XX Human platelet-derived growth factor related protein LP8.
XX Human; platelet derived growth factor related protein; LP8; VEGFh;
KW vascular endothelial growth factor h; tissue regeneration; vulnery;
KW atherosclerosis; PDGF-related protein; antiarteriosclerotic.
XX OS Homo sapiens.
XX PN WO200059940-A2.
XX PD 12-OCT-2000.
XX 24-MAR-2000; 2000WO-US06427.
XX 06-APR-1999; 99US-0127913.
XX (ELIL) LILLY & CO ELI.
XX Hammond LJ, Na S;
XX WPI; 2000-664991/64.
XX N-PSDB; AAC64426.
XX Enhancing tissue growth and promoting wound healing by administering
PT platelet-derived growth factor related protein, LP8 or its analog and
PT treating atherosclerosis by administering LP8 antagonist -
XX Claim 4; Page 63-64; 64pp; English.

The present invention describes a method for enhancing tissue growth,
CC promoting wound healing or stimulating smooth muscle growth by
CC administering a platelet-derived growth factor (PDGF) related protein,
CC designated LP8 or its analogue. Also described is a method of slowing
CC the progress of atherosclerosis or treating atherosclerosis comprising
CC the administration of an LP8 antagonist. The method is useful for
CC enhancing tissue growth, promoting wound healing and stimulating smooth


```
XX 19-JAN-2001 (first entry)
XX Human VEGF-X protein #4.
XX
XX VEGF-X; vascular endothelial growth factor; human; vulnery; cytotstatic;
XX antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.
XX
XX Homo sapiens.
XX
XX WO200037641-A2.
XX
XX 29-JUN-2000.
XX
XX 21-DEC-1999; 99WO-US30503.
XX
XX 22-DEC-1998; 98GB-0028377.
XX
XX 18-MAR-1999; 99US-0124967.
XX
XX 08-NOV-1999; 99US-0164131.
XX
XX (JANC ) JANSSEN PHARM NV.
XX
XX Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJH, Gosiewska A;
XX Dhanaraj SN, Xu J;
XX
XX WPI; 2000-442669/38.
XX
XX N-PSDB; AAA/1990.
XX
XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX
XX Disclosure; Fig 30B; 127pp; English.
XX
XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (Iia) which has
XX vulnery, cytotstatic, antirheumatic, antiarthritic, antipsoriatic and
XX antidiabetic activity and acts as an angiogenesis and vascularization
XX regulator. An antisense molecule of the invention is useful for treating
XX or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
XX retinopathy by inhibiting angiogenic activity or inappropriate
XX vascularization including formation and proliferation of new blood
XX vessels, growth and development of tissues, tissue regeneration and organ
XX and tissue repair in a subject. The products of the invention are useful
XX for preparing medicaments for treating wounds such as dermal ulcers,
XX pressure sores, venous sores, diabetic ulcers and burns and to promote
XX skin graft growth, tissue repair, proliferation of new blood vessels,
XX tissue regeneration and organ repair by promoting angiogenic activity or
XX vascularization. This sequence represents a human VEGF-X protein
XX described in the method of the invention.
XX
XX Sequence 345 AA;
XX
XX Query Match 100.0%; Score 754; DB 21; Length 345;
XX Best Local Similarity 100.0%; Pred. No. 6e-71;
XX Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCPTPRNFSVIREELKRTDTI 60
XX |
XX 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscptprnfsvsireelkrttdti 269
XX |
XX 61 FWPGCLLVKRCGGNCACCLHNCNCCQVPSKVTYKKYHEVLQRLPKTGVRGLHKSITDVAL 120
XX |
XX 270 fwpgcllvkrccgncacclhncnccqvp skvtkkyhevlqrlp ktgvr glhksitdval 329
XX |
XX 121 EHFEECDVCVRGSGTG 136
XX |
XX 330 ehfeedcvcrgstgg 345
```

RESULT 14

```
AAB10650
ID AAB10650 standard; Protein; 345 AA.
XX
XX AAB10650;
AC
XX
XX 19-JAN-2001 (first entry)
DT
XX
XX Human 990126vegX protein.
DE
XX
XX VEGF-X; vascular endothelial growth factor; human; vulnery; cytotstatic;
XX antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.
XX
XX Homo sapiens.
XX
XX WO200037641-A2.
XX
XX 29-JUN-2000.
XX
XX 21-DEC-1999; 99WO-US30503.
XX
XX 22-DEC-1998; 98GB-0028377.
XX
XX 18-MAR-1999; 99US-0124967.
XX
XX 08-NOV-1999; 99US-0164131.
XX
XX (JANC ) JANSSEN PHARM NV.
XX
XX Gordon RD, Sprengel JJ, Yon JR, Dijkmans JJH, Gosiewska A;
XX Dhanaraj SN, Xu J;
XX
XX WPI; 2000-442669/38.
XX
XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX
XX Disclosure; Fig 11; 127pp; English.
XX
XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (Iia) which has
XX vulnery, cytotstatic, antirheumatic, antiarthritic, antipsoriatic and
XX antidiabetic activity and acts as an angiogenesis and vascularization
XX regulator. An antisense molecule of the invention is useful for treating
XX or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
XX retinopathy by inhibiting angiogenic activity or inappropriate
XX vascularization including formation and proliferation of new blood
XX vessels, growth and development of tissues, tissue regeneration and organ
XX and tissue repair in a subject. The products of the invention are useful
XX for preparing medicaments for treating wounds such as dermal ulcers,
XX pressure sores, venous sores, diabetic ulcers and burns and to promote
XX skin graft growth, tissue repair, proliferation of new blood vessels,
XX tissue regeneration and organ repair by promoting angiogenic activity or
XX vascularization. This sequence represents the human 990126vegX protein
XX used to illustrate the method of the invention.
XX
XX Sequence 345 AA;
XX
XX Query Match 100.0%; Score 754; DB 21; Length 345;
XX Best Local Similarity 100.0%; Pred. No. 6e-71;
XX Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 LDLEDLYRPTWQLGKAFVGRKSRVVDNLNLTTEVRLYSCPTPRNFSVIREELKRTDTI 60
XX |
XX 210 ldledlyrptwqlgkafvgrksrvvdlntlteevrlyscptprnfsvsireelkrttdti 269
XX |
XX 61 FWPGCLLVKRCGGNCACCLHNCNCCQVPSKVTYKKYHEVLQRLPKTGVRGLHKSITDVAL 120
XX |
XX 270 fwpgcllvkrccgncacclhncnccqvp skvtkkyhevlqrlp ktgvr glhksitdval 329
XX |
XX 121 EHFEECDVCVRGSGTG 136
XX |
XX 330 ehfeedcvcrgstgg 345
```

KW	Mitogen; Growth factor; Glycoprotein; Signal.
FT	SIGNAL 1 26 POTENTIAL.
FT	CHAIN 27 190 VASCULAR ENDOTHELIAL GROWTH FACTOR.
FT	DISULFID 51 93 BY SIMILARITY.
FT	DISULFID 82 127 BY SIMILARITY.
FT	DISULFID 86 129 BY SIMILARITY.
FT	DISULFID 76 76 INTERCHAIN (BY SIMILARITY).
FT	DISULFID 85 85 INTERCHAIN (BY SIMILARITY).
FT	CARBOHYD 100 100 N-LINKED (GLCNAC...) (POTENTIAL).
SQ	SEQUENCE 190 AA; 22368 MW; 04D40B8D7913047F CRC64;
Query Match 13.6%; Score 102.5; DB 1; Length 190;	
Best Local Similarity 27.0%; Pred. No. 0.0017;	
Matches 24; Conservative 20; Mismatches 34; Indels 11; Gaps	
QY	41 CTPRNFVSYSIREEL-KRTDITFWPGCLLVKRCGNCACCLHNCQCQVPSKYTKYKHEV 99
DB	51 CRPIETLVDFIQEYPDIEIYFKPSCVPLMKCG--CC--NDEGLECVPEEFNTMQI 105
QY	100 LQLRPKTVGRGLKSLTDVALEHHECD 128
DB	106 MRIKPHOG----QHIGEMSFLOHNRKEC 129
RESULT 15	
VEGC_HUMAN	STANDARD; PRT; 419 AA.
ID	VEGC_HUMAN
AC	P49767;
DT	01-OCT-1996 (Rel. 34, Created)
DT	01-OCT-1996 (Rel. 34, Last sequence update)
DT	20-AUG-2001 (Rel. 40, Last annotation update)
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSOR (VEGF-C) (VASCULAR
DE	ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRP) (FLT4 LIGAND) (FLT4-
DE	L).
GN	VEGFC.
OS	Homo sapiens (Human).
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX	NCBI_TaxID=9606;
RN	[1]
RX	SEQUENCE FROM N.A., AND SEQUENCE OF 103-120.
RX	MEDLINE=86178224; PubMed=8617204;
RX	Joukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukkk E.,
RA	Saksela O., Kalkkinen N., Alitalo K.;
RT	"A novel vascular endothelial growth factor, VEGF-C, is a ligand for
RT	the Flt4 (VSGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases.";
RL	EMBO J. 15:290-298(1996).
RL	[2]
RP	ERRATUM.
RX	MEDLINE=96203094; PubMed=8612600;
RA	Joukov V., Pajusola K., Kaipainen A., Chilov D., Lahtinen I., Kukkk E.,
RA	Saksela O., Kalkkinen N., Alitalo K.;
RL	EMBO J. 15:1751-1751(1996).
RL	[3]
RP	SEQUENCE FROM N.A.
RX	MEDLINE=96312526; PubMed=8700872;
RA	Lee J., Gray A., Iuan J., Luoh S.-M., Avraham H., Wood W.I.;
RT	"Vascular endothelial growth factor-related protein: a ligand and
RT	specific activator of the tyrosine kinase receptor Flt4.";
RT	Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
RL	[4]
RP	SEQUENCE FROM N.A.
RA	Fitz L., Morris J.C., Towler P.S., Long A.J., Greco R.,
RA	Burgess P., Giannotti J., Charletta A., Hennessey D., Kovacic S.,
RA	Fitzgerald M., Scallietto H., Weich N., Neben S., Finnerty H.,
RA	Zollner R., Wang J., Nickbarg E., Gassaway R., Turner K.,
RA	Wood C.R.;
RL	Submitted (JUN-1996) to the EMBL/GenBank/DBJ databases.
CC	-!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
CC	CELL GROWTH.
CC	-!- SUBUNIT: HOMODIMER; DISULFIDE-LINKED.
CC	-!- PTM: PROBABLY PROTEOLYTICALLY PROCESSED IN THE C-TERMINUS.

PR 29-APR-1998: 98US-0083392.
 PR 29-APR-1998: 98US-0083495.
 PR 29-APR-1998: 98US-0083496.
 PR 29-APR-1998: 98US-0083499.
 PR 29-APR-1998: 98US-0083500.
 PR 29-APR-1998: 98US-0083545.
 PR 29-APR-1998: 98US-0083554.
 PR 29-APR-1998: 98US-0083558.
 PR 29-APR-1998: 98US-0083559.
 PR 30-APR-1998: 98US-0083742.
 PR 05-MAY-1998: 98US-0084366.
 PR 06-MAY-1998: 98US-0084414.
 PR 06-MAY-1998: 98US-0084441.
 PR 07-MAY-1998: 98US-0084598.
 PR 07-MAY-1998: 98US-0084600.
 PR 07-MAY-1998: 98US-0084627.
 PR 07-MAY-1998: 98US-0084637.
 PR 07-MAY-1998: 98US-0084639.
 PR 07-MAY-1998: 98US-0084640.
 PR 07-MAY-1998: 98US-0084643.
 PR 13-MAY-1998: 98US-0085323.
 PR 13-MAY-1998: 98US-0085338.
 PR 13-MAY-1998: 98US-0085339.
 PR 15-MAY-1998: 98US-0085373.
 PR 15-MAY-1998: 98US-0085379.
 PR 15-MAY-1998: 98US-0085580.
 PR 15-MAY-1998: 98US-0085582.
 PR 15-MAY-1998: 98US-0085689.
 PR 15-MAY-1998: 98US-0085697.
 PR 15-MAY-1998: 98US-0085700.
 PR 15-MAY-1998: 98US-0085704.
 PR 18-MAY-1998: 98US-0086023.
 PR 22-MAY-1998: 98US-0086392.
 PR 22-MAY-1998: 98US-0086414.
 PR 22-MAY-1998: 98US-0086430.
 PR 22-MAY-1998: 98US-0086486.
 PR 28-MAY-1998: 98US-0087098.
 PR 28-MAY-1998: 98US-0087106.
 PR 28-MAY-1998: 98US-0087208.
 PR 30-JUL-1998: 98US-0094651.
 PR 11-SEP-1998: 98US-0100038.
 XX (GETH) GENENTECH INC.

XX Wood WI, Goddard A, Gurney A, Yuan J, Baker KP, Chen J;

XX WPI: 1999-551358/46.

XX N-PSDB: AAZ34296.

XX New secreted and transmembrane polypeptides and their polynucleotides,
 XX useful for treating blood coagulation disorders, cancers and cellular
 XX adhesion disorders -

XX Claim 12; Fig 207; 530pp; English.

XX The present invention describes secreted and transmembrane polypeptides
 XX and their polynucleotides. The nucleotide sequences are useful as
 XX sources of probes, primers, for chromosome mapping, and for generation
 XX of antisense sequences. They can also be used to create transgenic
 XX animals. The proteins can be used to treat a variety of diseases and
 XX disorders, depending on their function. Diseases that may be treated
 XX include blood coagulation disorders, cancers and cellular adhesion
 XX disorders. They may also be used to raise antibodies. AAZ33891 to
 XX AAZ34338, and AAZ41685 to AAZ41774 represent polynucleotide and
 XX polypeptide sequence given in the exemplification of the present
 XX invention.

XX Sequence 345 AA;

Query Match 100.0%; Score 754; DB 20; Length 345;

Best Local Similarity 100.0%; Pred. No. 6e-71;

Matches 136; Conservative. 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LDLEDLYRPTWOLGKAFVGRKSRVVDNLLTEEVRLYSCTPRNFSVSIRELKRTDTI 60
 |||||
 Db 210 ldledlyrptwqlgkafvgrksrvvdnlltteevrlyscprnfsvsireelkrtddi 269
 |||||
 Qy 61 FWPGLLVKRCGGNCACCLHNCNECQCVPKVKTKYHEVLQLRPKTGVRLHKSLLTVAL 120
 |||||
 Db 270 fwpqcllvkrcggncacclhncnecqcvpskvtkkyhevlqlrpkgtvrglhksltdval 329
 |||||
 Qy 121 EHHEEDCVCRGSTGG 136
 |||||
 Db 330 ehheecdvcrgstgg 345
 |||||

RESULT 5

AAAY30023

ID AAY30023 standard; Protein; 345 AA.

XX

AC AAY30023;

XX

DT 11-OCT-1999 (first entry)

XX

DE Human vascular endothelial growth factor related protein.

XX

KW Vascular endothelial growth factor related protein; VEGF-R protein;
 KW tissue growth inhibition; tumour growth; cancer; tissue growth;
 KW angiogenesis; coronary artery blockage.

OS Homo sapiens.

XX

PN W09937671-A1.

XX

PD 29-JUL-1999.

XX

PF 26-JAN-1999; 99WO-US01574.

XX

PR 31-AUG-1998; 98US-0098548.

XX

PR 27-JAN-1998; 98US-0072635.

XX

PR 05-JUN-1998; 98US-0088089.

XX

PR 24-JUN-1998; 98US-0090544.

XX

PA (ELIL) LILLY & CO ELI.

XX

PI Dou S, Na S, Song HY;

XX

DR WPI: 1999-458680/38.

XX

DR N-PSDB: AAX86352.

XX

PS Claim 1; Page 56-58; 62pp; English.

XX

CC The present sequence represents a vascular endothelial growth factor
 CC related (VEGF-R) protein. VEGF-R can be used in assays to identify
 CC compounds that bind to it or that antagonize its activity. VEGF-R
 CC antagonists (e.g. anti-VEGF-R antibodies) are useful for inhibiting
 CC tissue growth. This is useful for inhibiting tumour growth and for
 CC treating cancer. VEGF-R itself can be used to stimulate tissue
 CC growth, angiogenesis and to treat coronary artery blockage. The
 CC VEGF-R coding sequence can be used for the recombinant production of
 CC the VEGF-R protein.

XX Sequence 345 AA;

Query Match 100.0%; Score 754; DB 20; Length 345;

Best Local Similarity 100.0%; Pred. No. 6e-71;

Matches 136; Conservative. 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LDLEDLYRPTWOLGKAFVGRKSRVVDNLLTEEVRLYSCTPRNFSVSIRELKRTDTI 60
 |||||

Db 210 ldledlyrptwqlgkafvgrksrvvdlnllteevrlyscprnfsvireelkrttdti 269
 QY 61 FWPGCLLVKRCGNCACCLHNCNECQCVPKSKYKHYEVLQLRPKTGVRGLHSLTDVAL 120
 Db 270 fwpqcllvkrcgncacclhncnecqcvpskvtkkyhevliqlrpkgtvrglhxsltdval 329
 QY 121 EHHEECDCVCRGSGTG 136
 Db 330 ehheecdcvcrgstg 345

RESULT 6

AAB48657
 ID AAB48657 standard; Protein; 345 AA.

XX AC AAB48657;

XX DT 09-MAR-2001 (first entry)

XX DE Human zvegfg3, SEQ ID NO:33.

XX KW Human; zvegfg3; zvegfg4 fusion; growth factor homologue; VEGF/PDGF family;
 KW CUB domain; PDGF-like activity; mitogenic; osteogenic;
 KW neovascularisation; tissue repair; proliferation; differentiation;
 KW liver damage; neuroregenerative; Alzheimer's disease; multiple sclerosis;
 KW periodontal disease; bone fracture; wound healing; vulnary; ischaemia;
 KW immunomodulation; hepatic.

XX OS Homo sapiens.

XX PN WO200066736-A1.

XX PD 09-NOV-2000.

XX PF 03-MAY-2000; 2000WO-US40047.

XX PR 03-MAY-1999; 99US-0304216.

XX PR 10-NOV-1999; 99US-0164463.

XX PR 04-FEB-2000; 2000US-0180169.

XX PA (ZYMO) ZYMOGENETICS INC.

XX PI Gilbert T, Hart CE, Sheppard PO, Gilbertson DG;

XX DR WPI; 2000-687541/67.

XX DR N-PSDB; AAC81582.

XX PT Growth factor homologs and the nucleic acids that encode them, useful
 PT e.g. for treating liver damage, ischaemia, multiple sclerosis and
 PT Alzheimer's disease

XX PS Claim 48; Page 125-126; 143pp; English.

XX CC The invention relates to the human growth factor homologue zvegfg4
 CC (AAB48653), and nucleic acids encoding it (AAC81555). zvegfg4 is a member
 CC of the PDGF (platelet-derived growth factor)/VEGF (vascular endothelial
 CC growth factor) family. zvegfg4 has a growth factor domain (AAB48654)
 CC characterised by a PDGF cysteine knot structure, and a CUB domain
 CC (AAB48655) which has a beta barrel structure. zvegfg4 has PDGF-like
 CC activity, having mitogenic activity on fibroblasts, vascular smooth
 CC muscle cells and pericytes, and has also been shown to stimulate bone
 CC growth. The invention also relates to fusion proteins comprising human
 CC zvegfg4 or fragments thereof, particularly human zvegfg4/human zvegfg3
 CC fusions; expression constructs and host cells comprising human zvegfg4
 CC nucleic acids; the recombinant expression of human zvegfg4; an antibody
 CC which binds to human zvegfg4 or a fragment thereof; a method of activating
 CC a cell-surface PDGF receptor using a zvegfg4-derived polypeptide; a
 CC method of modulating the proliferation, differentiation, migration or
 CC metabolism of bone cells, comprising exposing bone cells to
 CC zvegfg4-derived polypeptides; and a method of detecting a genetic
 CC abnormality in the zvegfg4 gene of a patient. zvegfg4 proteins and derived
 CC fragments may be used to stimulate tissue development or repair, or
 CC cellular differentiation or proliferation. They are particularly used for

CC the treatment or repair of liver damage, and may also be used to
 CC modulate neurite growth (e.g., in the treatment of Alzheimer's disease or
 CC multiple sclerosis). Due to their osteogenic activity, they may be used
 CC in the treatment of periodontal disease and fractures. They may also be
 CC used to enhance expansion and mobilisation of haematopoietic stem cells
 CC and endothelial precursor stem cells, which may be useful in the
 CC treatment of ischaemia, in wound healing, and in the modulation of the
 CC immune system. The present sequence represents human zvegfg3.

XX Sequence 345 AA;

Query Match 100.0%; Score 754; DB 21; Length 345;

Best Local Similarity 100.0%; Pred. No. 6e-71;
 Matches 136; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LDLEDLYRPTWQLGKAFVGRKSRVVDLNLTEEVRLYSCPTNFSVIREELKRTDTI 60
 Db 210 ldledlyrptwqlgkafvgrksrvvdlnllteevrlyscprnfsvireelkrttdti 269

QY 61 FWPGCLLVKRCGNCACCLHNCNECQCVPKSKYKHYEVLQLRPKTGVRGLHSLTDVAL 120
 Db 270 fwpqcllvkrcgncacclhncnecqcvpskvtkkyhevliqlrpkgtvrglhxsltdval 329

QY 121 EHHEECDCVCRGSGTG 136

Db 330 ehheecdcvcrgstg 345

RESULT 7

AAB24250

ID AAB24250 standard; Protein; 345 AA.

XX AC AAB24250;

XX DT 08-FEB-2001 (first entry)

XX DE Human platelet-derived growth factor related protein LP8.

XX KW Human; platelet derived growth factor related protein; LP8; VEGFh;
 KW vascular endothelial growth factor h; tissue regeneration; vulnary;
 KW atherosclerosis; PDGF-related protein; antiarteriosclerotic.

XX OS Homo sapiens.

XX PN WO200059940-A2.

XX PD 12-OCT-2000.

XX PF 24-MAR-2000; 2000WO-US06427.

XX PR 06-APR-1999; 99US-0127913.

XX PA (ELIL) LILLY & CO ELI.

XX PI Hammond LJ, Na S;

XX DR WPI; 2000-664991/64.

XX DR N-PSDB; AAC64426.

XX PT Enhancing tissue growth and promoting wound healing by administering
 PT platelet-derived growth factor related protein, LP8 or its analog and
 PT treating atherosclerosis by administering LP8 antagonist

XX PS Claim 4; Page 63-64; 64pp; English.

XX CC The present invention describes a method for enhancing tissue growth,
 CC promoting wound healing or stimulating smooth muscle growth by
 CC administering a platelet-derived growth factor (PDGF) related protein,
 CC designated LP8 or its analogue. Also described is a method of slowing
 CC the progress of atherosclerosis or treating atherosclerosis comprising
 CC the administration of an LP8 antagonist. The method is useful for
 CC enhancing tissue growth, promoting wound healing and stimulating smooth